

REAL TIME COMPUTER SEA BASED/LAND BASED HWCI



Real Time Computer HWCI Requirement to EB allocation

REQUIREMENTS MATRIX SUMMARY

41 Total Requirements

HWCI Requirements to EB Allocation

180 With EB3

8 With EB4

12 With EB5

al Control S TCS RTP HARDWARE DESIGN SAR SATCOM OPERATOR STATION OPERATOR STATION PROCESSOR C-BAND Ku-BAND LINK RS-485 RS-422 **SUBSYSTEM SUBSYSTEM** SUBSYSTEM **SATCOM MANAGER ASSEMBLY ANTENNA ASSLY** ASSLY LVL 1 I/F 10Base2 DISPLAY lefoonlacksquareDISPLAY IMAGERY LAN RS-422 TLMTRY (DN) & C2 (UP) RF TX/RCV ANTENNA TO / FROM NRT CPU SATCOM RS-170A RS-422 ANT. CTRL RS-170A OPER STA 2 OUT X 6 DISPLAY DISPLAY 10Base2 TAC-92 ANTENNA CONTROLLER TLMY VIDEO **REAL DATALINK** SUPPORT **INTEGRATED** TIME **KEYBOARD CONTROL KEYBOARD EQPT** DATA SUBSYSTEM **MODULES TERMINALS** (DCM) TOUCH TOUCH SCREEN (IDT) UPS SCREEN RS-170A UPS UPS UPS NAV. RGB RGB INPUT MANUAL RS-422 TLMTRY (DN) RS-422 CONTROLS RS-422 & C2 (UP) (P/O RTSS) MC-2 **NRT NRT** RS-170A **CPU CPU** 10BaseTRS-422 RS-170A MANUAL RS-422 MC-1 MC-2 INPUT CONTROLS (P/O RTSS) TO / FROM IMAGERY LAN 10Base2 RS-232 IDT CTRL 10BaseT SCSI UPS UPS LOCAL LAN 10BaseT EXTERNAL LAN BROUTER 10BaseT C4I TCIM TCIM INTERCOM INTERCOM EXTERNAL **PRINTER** STORAGE



Real Time Computer

Environmental Considerations

• Temperature:

- 743i Operation: -5 to 55 C Non-Operation -40 to 70 C

- CD-Rom Operation: -5 to 40 C Non-Operation -10 to 60 C

- 4mm DAT Operation: 5 to 40 C Non-Operation -40 to 70 C

Drive Enclosure Operation: 0 to 50 C Non-Operation -45 to 85 C

– VME Chassis Operation: 0 to 50 C

• Humidity:

- 743i Operation: 40 C:95% RH Max

- CD-Rom Operation: 22C:8% to 80% Non-Oper @60C 5% to 95%

- 4mm DAT Operation: 26C 20% to 80% RH max

Drive Enclosure Operation: 8% to 70% Non-Operation 5% to 95%

VME Chassis Unavailable



Real Time Computer HWCI

Functional Description

The Real Time Subsystem consists of the HWCIs and the CSCIs necessary for the real time processing of data

The Real Time Subsystem will have a Real Time Computer HWCI and a Manual Control HWCI

The purpose of the Real Time Computer HWCI is to provide real time processing capability to the TCS



Real Time Computer

External Subsystem Interface

422 Serial Interface to IDT switching

232 Serial Interface to Manual Controls

10 Base T Operator Console Local Network Interface

10 Base 2 AVSI Network Interface to DCM(s)

SCSI 2 Interface to Removable Hard Drive(s)

422 Serial Interface to NAVSSI on Sea Based



Real Time Computer

Internal Subsystem Interface

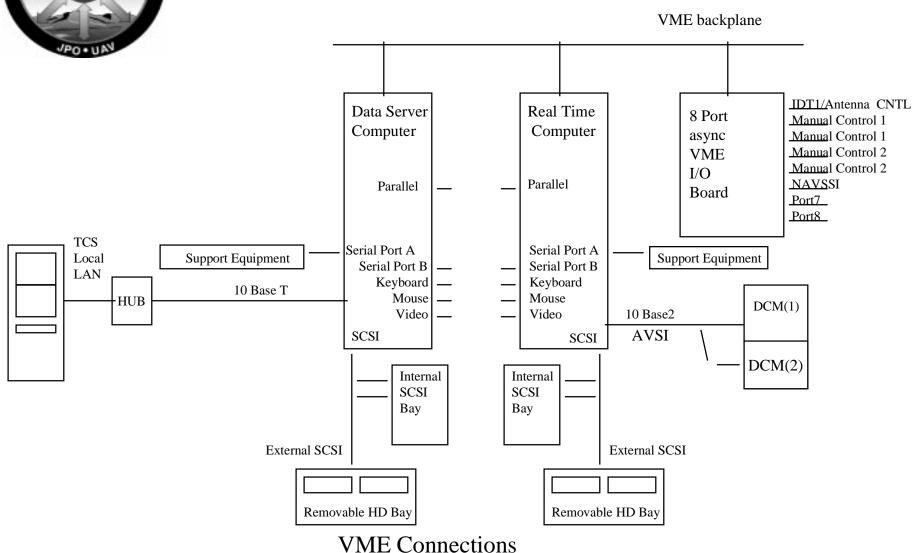
Serial Interface to Support Equipment

Network interface over VME Backplane to Data Server

SCSI interface to
CDROM
4mm DAT Drive
Hard Drives

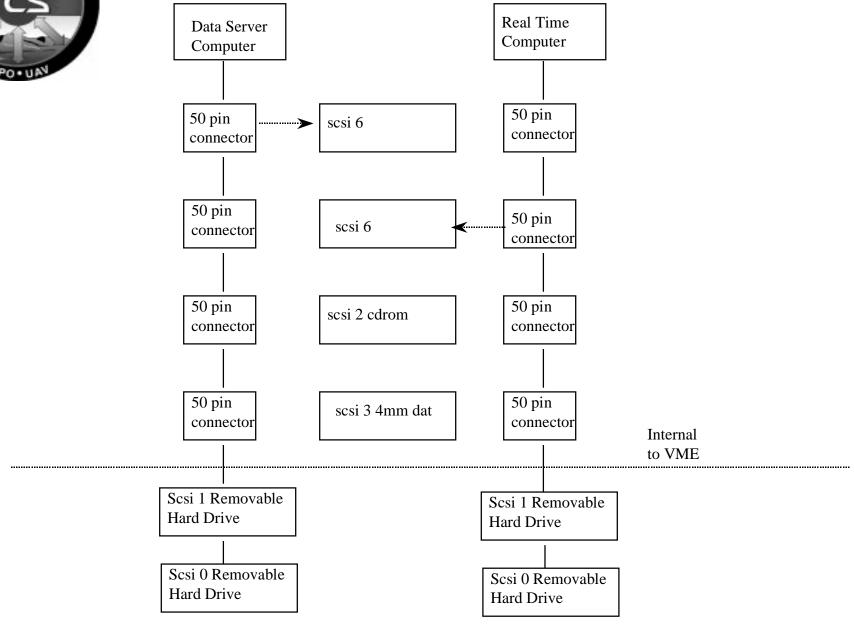


Real Time Computer Preliminary Design Drawings Serial Connections



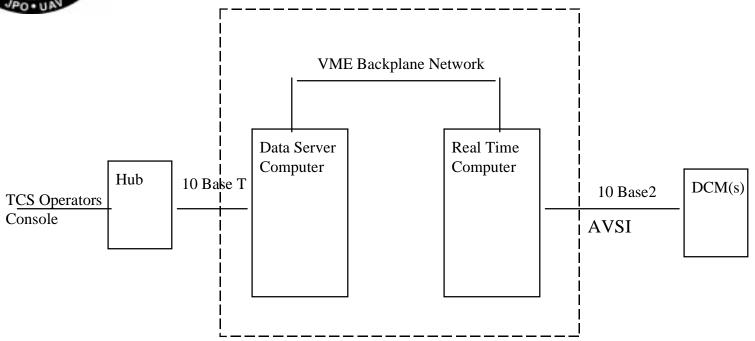
TCS JPO·UN

Real Time Computer Preliminary Design Drawings SCSI Connections





Real Time Computer Preliminary Design Drawing Network Connections





Real Time Computer Specifications

- •All Real Time Computer HWCI's are COTS
- Packaging is commercial
- Documentation is vendor provided
- Support Equipment
 - •External Terminal for Diagnostics
- •EMI elements are under investigation
- •Dimensions 17.50"H 19.00"W

22.00" D

Power

1.50 amp Peak 1.30 amp Operational

114.30 Unit Volts 148.59 Volt Amps



Real Time Computer Parts List

- 2 HP Model 743i/100 with On-Board 8-Plane Graphics
- 4 RAM expansion 64MB
- 1 Multi-drive removable hard disk drive chassis external rack-mount (SE-SCSI)
- 2 Removable hard disk drive (2GB) (in docking canister)
- 1 VME Serial Interface Card
- 1 CenterCOM RKMT-5 Rack Mount
- 1 VME Back Plane Networking Software
- 1 CenterCOM Ethernet Hub, 12RJ45, 1AUI